

Name: _____

at1110paper_practice_test (v38)

1. Expand the following expression into standard form.

$$(5x - 3)^2$$

$$25x^2 - 15x - 15x + 9$$

$$25x^2 - 30x + 9$$

2. Expand the following expression into standard form.

$$(2x + 9)(6x + 7)$$

$$12x^2 + 14x + 54x + 63$$

$$12x^2 + 68x + 63$$

3. Solve the equation.

$$5x^2 + 12x + 8 = 2x^2 + 5x + 4$$

$$3x^2 + 7x + 4 = 0$$

$$(3x + 4)(x + 1) = 0$$

$$x = \frac{-4}{3} \quad x = -1$$

4. Factor the expression.

$$16x^2 - 81$$

$$(4x - 9)(4x + 9)$$

5. Solve the equation.

$$(4x - 9)(5x + 2) = 0$$

$$x = \frac{9}{4} \quad x = \frac{-2}{5}$$

6. Factor the expression.

$$x^2 + 7x + 12$$

$$(x + 3)(x + 4)$$

7. Expand the following expression into standard form.

$$(3x + 2)(3x - 2)$$

$$\begin{aligned} 9x^2 - 6x + 6x - 4 \\ 9x^2 - 4 \end{aligned}$$

8. Solve the equation with factoring by grouping.

$$20x^2 - 24x + 15x - 18 = 0$$

$$\begin{aligned} (4x + 3)(5x - 6) = 0 \\ x = \frac{-3}{4} \quad x = \frac{6}{5} \end{aligned}$$